DISCONS.
RM

SUBMISSION FOR DISCHARGING PLANNING CONDITIONS

NEW BUNGALOW REAR OF 34 BUTT LANE

PLANNING APPLICATION NO. 11/00088/FUL



3.

PLANNING PERMISSION_

Discharge Conditions 1, 2, 3, 4, 5, 6,

Name and Address of Applicant
Mr I McSeveney
34 Butt Lane
Hinckley
LE10 1LD

Application No.

11/00088/FUL

Particulars and location of development:

ERECTION OF BUNGALOW

Land Rear Of 34 Butt Lane Hinckley Leicestershire

Further to planning permission granted on the 8th February 2011, please find enclosed details discharging the conditions:

1. The development hereby permitted shall be begun before the expiration of three years from the date of this permission.

Proposed development due to commence in March 2013

2. The development hereby' permitted shall not be carried out otherwise than in complete accordance with the. submitted application details, as follows: Blockplan, Amended plans BDS.0510-AMD -01 and BDS.0510-AMD -02 received on 12 ~pr:il2011.

Will be in accordance to plans, these have been developed further for building reg approval and are enclosed in Appendix A

3. Before an development commences, representative samples of the types and colours of materials to be used on the external elevations of the proposed dwelling shall be deposited with and approved in writing by the Local Planning authority, and the scheme shall be implemented in accordance with those approved materials.

Please refer to Appendix B for external materials & samples as issued

4. Prior ,to the commencement of development a Code for Sustainable Homes Design Stage Assessment demonstrating that the dwelling hereby approved can be constructed to a minimum of

Code Level 3 shall be provided to the local Planning Authority. The dwelling constructed pursuant to this permission shall not be occupied until a final certificate demonstrating that it has been constructed to a minimum of Code Level 3 has been provided to the Local Planning Authority.

Please refer To Appendix C for Pre Assessment Report

5. Notwithstanding the submitted plans no development shall take place until full details of proposed. boundary treatments have been submitted to and approved in writing by the Local Planning Authority and these, works, shall be' carried out as. approved prior to first occupation of the dwelling hereby approved.

Please Refer to Appendix D for boundary treatments in accordance with planning Approval.

6. The approved hard and soft landscaping scheme shall be carried out in accordance with the approved details. The soft landscaping scheme shall be maintained for a period of five years from the date of planting. During this period any trees or shrubs which die or are damaged, removed, or seriously . diseased shall be replaced by trees or shrubs of a similar size and species to those originally planted , at which time shall be specified in writing by the Local Planning Authority.

Will be in accordance to plans, these have been developed and are enclosed in Appendix E for hard & soft landscaping

7. Notwithstanding the provisions of the Town and Country Planning (General Permitted Development) Order 1995 as amended by (Amendment) (No.2)·(England) Order 2008 (or any order revoking or re-enacting that Order with or without rnoditicationj.developrnent within Schedule 2, Part 1 Classes A to E inclusive shall not be carried out unless planning permission for such development has first been granted by the Local Planning Authority:

Acknowledged.

8. Before first occupation of the dwelling hereby approved, the access drive shall be surfaced with tarmacadam, concrete or similar hard. bound material (not' loose aggregate) and shall be so maintained at all times. '

Acknowledged, ditto for condition 9,10 & 11

9. Before first occupation of the dwelling hereby approved, two car parking·spaces shall be made' within the curtilage. The' parking spaces· so provided shall not be. obstructed and shall thereafter' permanently remain available for car parking, unless otherwise agreed in writing by the Local Planning Authority . ' .

10. No gates shall be erected to the vehicular access.

11. The windows to be inserted in the south western elevation shall be top hung and obscure glazed and' retained as such at all times unless otherwise agreed in writing with the Local Planning Authority.

Appendix A Supplementary Elevations



Final Proposal Issue

MAS architecture / interiors / project management

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Also in Bahrain as MASMARCH

www.masarchitecture.co.uk

project: Land to R/O 34 Butt Lane, Hinckley

drawing: Proposed Visuals

scale: NTS @ A1 date: Jan 2013 dwg. no. 10406(03)002

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project: Land to R/O 34 Butt Lane, Hinckley

drawing: Proposed Visuals

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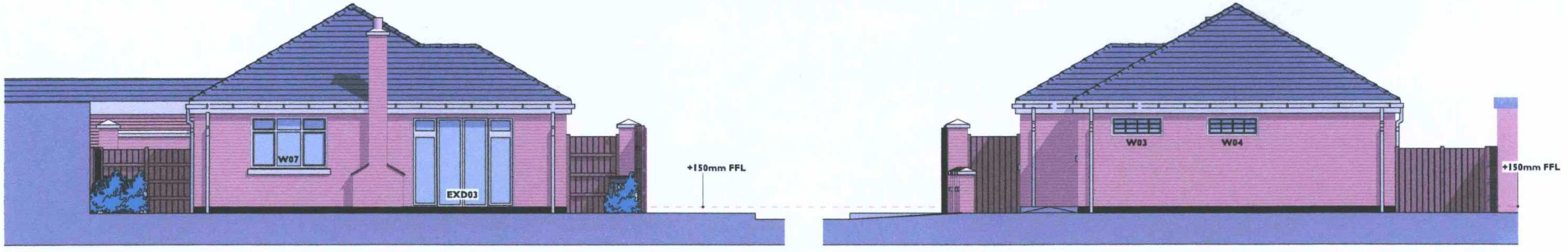

PROPOSED ELEVATIONS - 1/50

Final Poroposal Issue

Rev A : Jan '13: Further detail added

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project: Land to R/O 34 Butt Lane, Hinckley

drawing: Proposed Elevations

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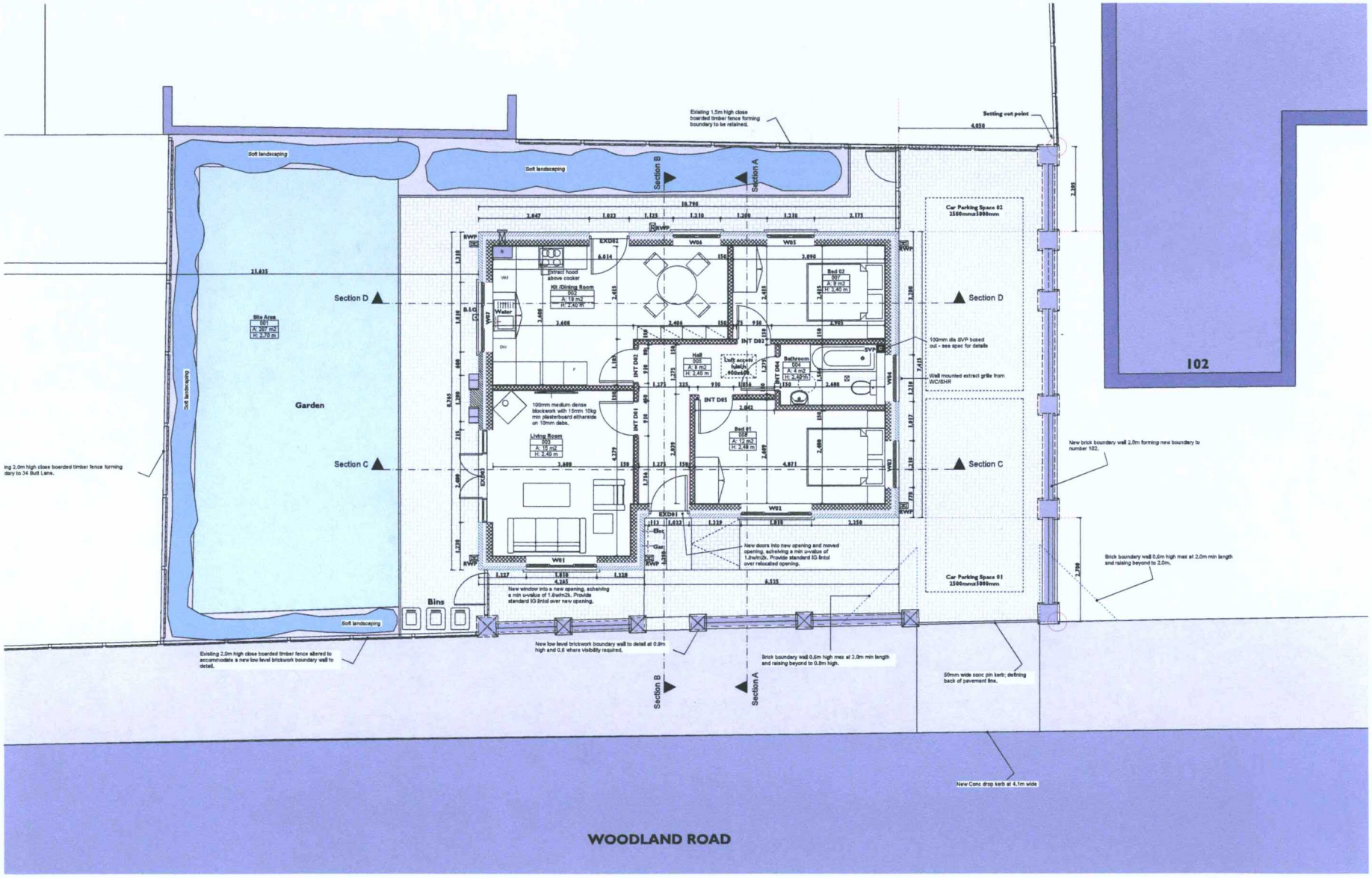

PROPOSED GROUND FLOOR PLAN - 1/50

Final Poroposal Issue

Rev A : Jan '13: Further detail added

MAS architecture / interiors / project management

project: Land to R/O 34 Butt Lane, Hinckley

drawing: Proposed Ground Floor Plan

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project: **Land to R/O 34 Butt Lane, Hinckley**

drawing: **Proposed Visuals**

scale: **NTS @ A1** date: **Jan 2013** dwg. no. **10406(03)002**

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project: **Land to R/O 34 Butt Lane, Hinckley**

drawing: **Proposed Visuals**

scale: **NTS @ A1** date: **Jan 2013** dwg. no. **10406(03)003**

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PROPOSED ELEVATIONS - 1/50

Final Poroposal Issue

Rev A : Jan '13: Further detail added

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drawing: Proposed Elevations

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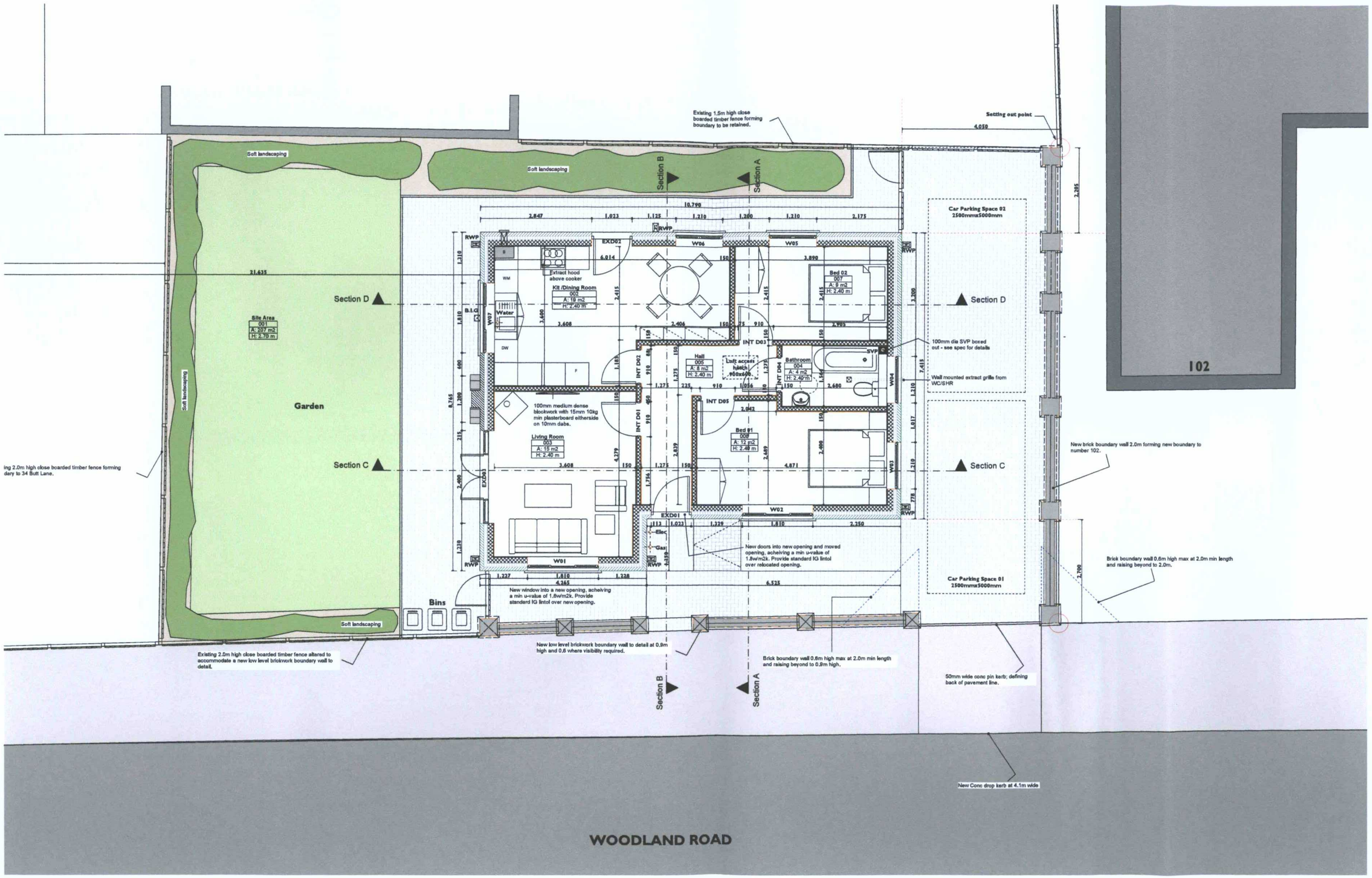

PROPOSED GROUND FLOOR PLAN - 1/50

Final Poroposal Issue

Rev A : Jan '13; Further detail added

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drawing: Proposed Ground Floor Plan

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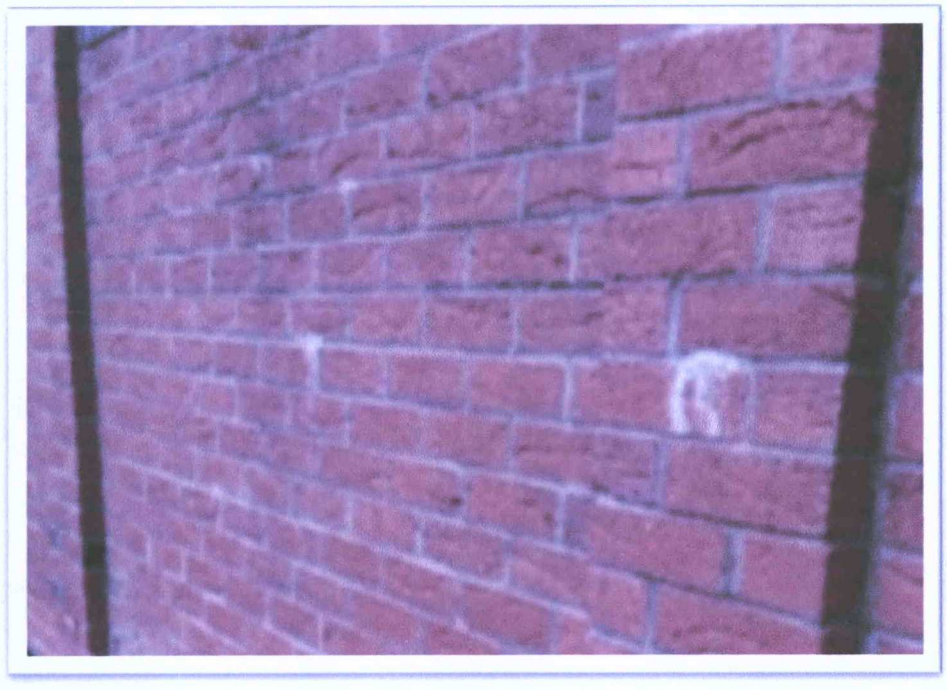
Appendix B External Materials

EXTERNAL MATERIALS

Facing Bricks

Ibstock Oakleigh Red Blend





Engineering Bricks

Ibstock Atlas Smooth Blue



Roof Tiles

Plain Old English concrete Marley tile





Coping Stones & Sills

Apex stone bathstone





Block Paving

Concrete Block Paving, colour brindle, pattern herringbone 45%





Windows, gutters, down pipes

Upvc white. Top windows with lead





Appendix C Code 3 Sustainable Homes Report

Twenty16 Design

Land r/o 34 Butt Lane, Hinckley

Code for Sustainable Homes
Pre Assessment Report

Submitted by:	Ollie Westover
Submitted to:	MAS Architecture
Issued:	January 2013
Issue:	1

Contents

Contents 2
Document Control 2
Introduction 3
Graphs of Results 5
Priorities for the Developer 6
Energy 7
Water 14
Materials 17
Surface Water Run-Off 20
Waste 23
Pollution 27
Health and Wellbeing 29
Management 33
Ecology 37
Appendix 1: Twenty16 Design Credit Tracker 41
Appendix 2: The Code for Sustainable Homes 42

Document Control

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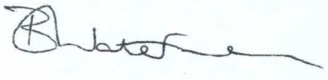
BW	29.01.13	

Introduction

This Pre-Assessment report has been produced for the development of 1 new residential dwelling proposed on the land rear of 34 Butt Lane, Hinckley. It sets out a strategy for achieving the required development standard of Code for Sustainable Homes Level 3. This is the standard required by the Local Authority, the Borough of Hinckley and Bosworth.

The Code for Sustainable Homes ("The Code") is the UK's national rating system for new build housing. It is administered by the Building Research Establishment (BRE) on behalf of the Department for Communities and Local Government (CLG)

The Code is divided into 34 'issues' spread across 9 categories and is made up of mandatory and tradable requirements. Each section of the Code carries a different weighting, so a credit from one section can not necessarily be traded directly with a credit from another section. Credits are multiplied by the category weighting factor to give an overall percentage.

There are 107 credits available which, after weighting is applied, give the overall percentage score. For a Level 3 rating, the development must achieve a total score of **57** percentage points or more, as well as achieving all of the mandatory elements relevant to that Code Level, some of which do not score credits.

The overall score will be made up of credits from the mandatory sections and tradable, credit-scoring sections of the Code. The mandatory requirements of the Code which score no credit must also be completed for any rating to be achieved. The purpose of this report is to identify the mandatory elements and the preferred tradable credits recommended through the experience and cost analysis of the assessor.

The report contains a breakdown of each credit with an explanation of why the credit has, or has not been assumed, along with a brief description of each issues purpose and assessment criteria.

This Pre-Assessment stage is not a formal assessment, is based on limited information and does not result in certification. Its purpose is to define a potential strategy for achieving the required number of points and identify as early as possible any areas which are likely to cause issues. As a result, this is not a definitive list of credits achieved or achievable.

This stage is generally followed by the formal Design Stage Assessment, which is based on design drawings and developer commitments is submitted to BRE for QA checking, and results in an *interim certificate.*

Following this, a Post Construction Review is carried out, which involves a site visit by the assessor, and confirmation from the developer that the Design Stage commitments have been satisfactorily carried out. This assessment stage results in the *final certification*.

The report is divided into the same 9 sections as the Code. Each credit is accompanied by an analysis of the reasons for the individual credit choices made. At Appendix 1 our Credit Tracker is included which is used throughout the process to keep a track of changes and updates to the assessment. At Appendix 2, a brief summary of the Code and how it is assessed is also included.

Summary of Results

The Code rating required for this scheme is **Level 3** which requires a score of 57 percentage points or more. At this stage, the predicted score, based on the information we have, is **57.5%** which is compliant, but leaves only a small margin of tolerance.

This report analyses areas where credits could be gained or lost as the design process progresses.

The diagrams on the following page give a graphical indication of the currently predicted score, and which sections are contributing most to the overall total.

Graphs of Results

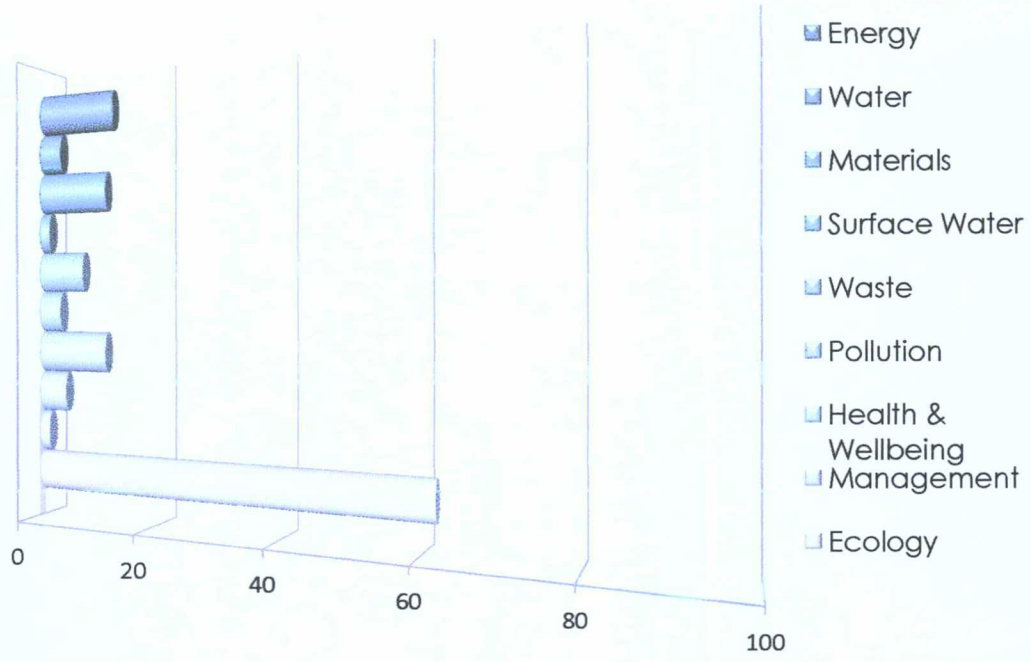


Fig 1. Predicted contribution to individual sections and predicted total score

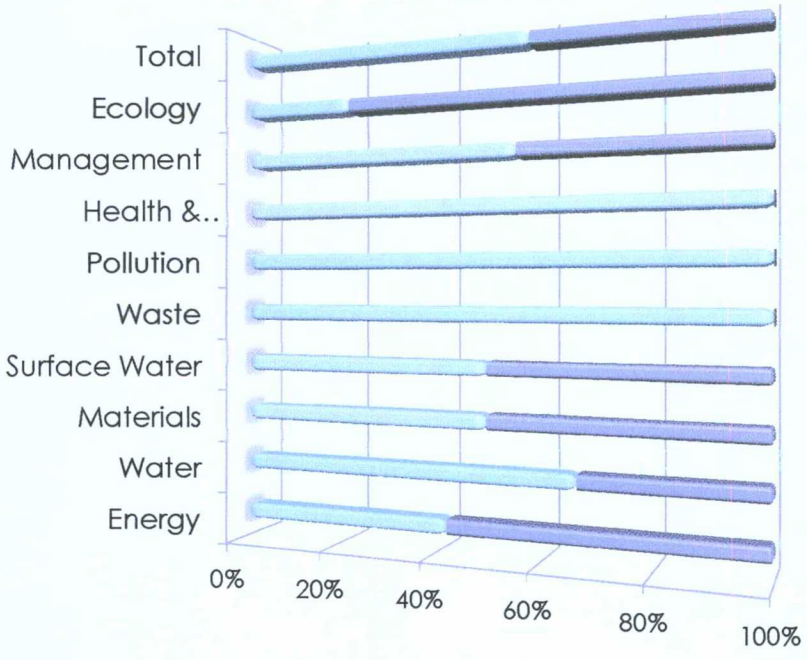


Fig 2. Predicted percentage of credits achievable by category and in total

Priorities for the Developer

We recommend that the following areas are looked at and where necessary, the appropriate consultants employed as soon as possible.

While this report makes assumption based on experience of many similar projects, each site poses different issues, and until some of the unknowns are looked at, many of the credit predictions made in the following section remain theoretical only.

It is recommended that the following items are looked at first:

- The SAP calculations should be looked at as early as possible. In order to undertake these, the assessor will need CAD plans (or dimensioned drawings), information on the proposed U Values, heating system, potential renewable technologies, and an idea of the approach to be taken with linear thermal bridging.

- The design team should begin to look at the various requirements relating to accessibility in the Code (WAS1, WAS3, HEA3 and HEA4), with particular emphasis on ensuring Lifetime Homes is achievable.

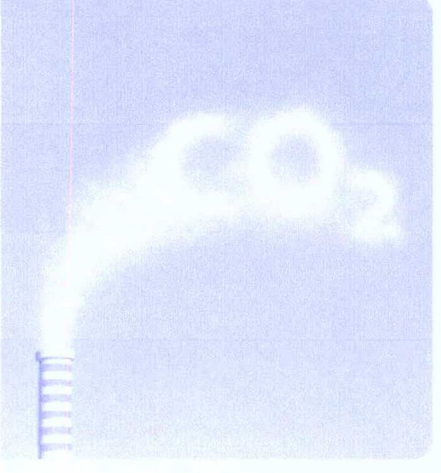
- The Daylight and View of Sky calculations should be undertaken to ensure our prediction of credits is achieved

- The mandatory requirement for SUR1 should be looked at as soon as possible, as the nature of the site means that some kind of attenuation is going to be needed. The input of an engineer or hydrologist will be required.

The earlier these elements are looked at in the project, the sooner a firm idea of the strategy to be adopted can be made.

Section 1

Energy



ENE1- Dwelling Emission Rate

Predicted: 0.1of 10 Credits

Mandatory Element? - No

Aim

To limit emissions of carbon dioxide (CO_2) to the atmosphere arising from the operation of a dwelling and its services.

Assessment Criteria

Credits are awarded on a sliding scale based on the percentage improvement in the Dwelling Emission Rate (DER) (estimated carbon dioxide emissions in kg per m2 per annum arising from energy use for heating, hot water and lighting for the actual dwelling), over the Target Emission Rate (TER) (the maximum emission rate permitted by Building Regulations for a similar 'notional' dwelling), for the dwelling where DER and TER are as defined in ADL1A 2010 of the Building Regulations.

To demonstrate compliance, SAP calculations from a registered ocDEA (on-construction Domestic Energy Assessor) are required, along with a commitment from the developer to install any renewable technologies in line with any appropriate requirements.

Pre-Assessment Appraisal

This issue has mandatory levels, only for Code levels 4 and above. The energy requirement under this issue for Code Level 3 (i.e. a 25% improvement over 2006 Building Regulations) is now the equivalent of meeting the Building Regulations only (since the 2010 update) and so scores zero credits.

The SAP calculations should be undertaken as soon as possible to firm up the credits achievable, but at this early stage, we are assuming that the client will want to achieve F without the use of renewables if possible.

This means the score in this section will be limited, and at this stage we predict a score of 0.1 credits (0 credits would still be Code 3 compliant, but have no tolerance, should the final result be worse than the design).

It is worth noting that we generally see the credits in this section and ENE2 and ENE7 (following) as interchangeable – i.e. we will discuss the *overall* score required with the SAP assessor, but at this stage not get too bogged down with the exact score in each issue.

Credits under this issue and ENE2 are measured in 0.1 credit increments, which means it can be difficult to predict credits at this stage with any real certainty. The prediction above remains preliminary until SAP ratings are underway.

ENE2 – Fabric Energy Efficiency

Predicted: 3 of 9 Credits

Mandatory Element? - No

Aim

To improve fabric energy efficiency performance thus future-proofing reductions in CO_2 for the life of the dwelling.

Assessment Criteria

Credits are awarded based on the Fabric Energy Efficiency (FEE) for the dwelling. This is a metric rating of the heat loss through the fabric of the building (measured in kWh/m²/year) and is dependent on the thermal performance of the built elements, as well as thermal bridging details and air permeability rates.

Pre-Assessment Appraisal

The minimum score that can be achieved here is 3 credits, which for a detached house means a FEE score of ≤60kWh/m²/yr.

Early consideration of the buildings fabric performance, thermal bridging, air-tightness and ventilation etc. should allow 3 credits to be scored here. In our experience of previous projects of this nature, this is generally achievable.

These are cost-effective credits to achieve as improvements are generally design-based rather than through the addition of bolt-on technologies. We will liaise with the SAP assessor and design team to ensure credits are maximised in this section if possible in the most economical way.

ENE3 – Energy Display Devices

Predicted: 2 of 2 Credits

Mandatory Element? - No

Aim

To promote the specification of equipment to display energy consumption data, and to encourage occupants to reduce their energy use.

Assessment Criteria

Credits are awarded where a compliant device shows occupants either the primary heating fuel consumption (1 credit) or the electricity consumption (1 credit) or both, for 2 credits.

Pre-Assessment Appraisal

These are relatively easy credits to achieve and the full 2 credits should be sought for providing devices that show the occupants the consumption of both heating *and* electrical energy. There are several sources of information on the internet of suitable compliant products and we can advise further on suitable ranges, which are constantly being updated.

While the meters were initially relatively expensive, increasing demand for these products has brought costs down over time and several utility companies are now producing their own compliant meters for very little cost (or free), provided the occupier is happy to stay with that particular supplier.

ENE4 - Drying Space

Predicted: 1 of 1 Credits Mandatory Element? - No

Aim

To provide a reduced-energy means of drying clothes and reduce occupants' reliance on tumble driers.

Assessment Criteria

Credits are awarded based on the provision for drying space for each dwelling type in accordance with the technical guide.

Pre-assessment Appraisal

This is a credit that should easily be achieved. For houses, the simplest solution is to provide a drying line in the garden of at least 6m in length. The line needs to be a permanent fixing.

An alternative is to provide a line internally, in a space that is suitably ventilated.

ENE5 - Energy Labelled White Goods

Predicted: 2 of 2 Credits Mandatory Element? - No

Aim

To encourage the provision or purchase of energy efficient white goods, reducing the CO_2 emissions from appliance use in the dwelling.

Assessment Criteria

Credits are awarded where information is provided relating to the provision of energy efficient white goods, or where energy efficient white goods are supplied in accordance with the criteria in the technical guide.

Pre-assessment Appraisal

To achieve 1 credit here, all that is required, is to provide a leaflet to the occupiers explaining the benefits of purchasing energy efficient appliances. This is generally included in the Home User Guide (see MAN1 below).

To achieve 2 credits, suitably specified white goods need to be provided. As this is a private dwelling, it is assumed that white goods will be provided, and that these can be suitably rated as to achieve both credits.

The exact specification required can be discussed further into the project, but at this stage we assume both credits will be scored.

ENE6 – External Lighting

Predicted: 2 of 2 Credits

Mandatory Element? - No

Aim

To encourage the provision of energy efficient external lighting, thus reducing CO2 emissions associated with the dwelling.

Assessment Criteria

Where all applicable external lighting within the development is provided by dedicated energy efficient fitting and fitted with timers/sensors, as detailed in the technical guide.

Pre-assessment Appraisal

These credits are achieved relatively simply through careful specification of the external light fittings. Both credits are predicted at this stage, and relatively simple to achieve.

The requirement for the first credit is that space lighting is supplied with low energy bulbs.

For the second credit burglar security lighting must have a maximum wattage of 150 W, movement detecting control devices (PIR) and daylight cut-off sensors.
All other security lighting needs to be provided with energy efficient bulbs and be fitted with daylight cut-off sensors or a timer switch.

If no security lighting is provided, the second credit can be achieved by default, but only if space lighting all meets the required standard.

ENE7 - Low or Zero Carbon (LZC) Technologies

Predicted: 0 of 2 Credits

Mandatory Element? - NO

Aim

To reduce carbon emissions and atmospheric pollution by encouraging local energy generation from renewable sources to supply a significant proportion of the energy demand.

Assessment Criteria

Credits are awarded based on the percentage reduction in total carbon emissions that result from using Low or Zero Carbon (LZC) Energy Technologies for each dwelling using the calculation method detailed in Calculation Procedures, with credits awarded as detailed in the technical guide.

Pre-assessment Appraisal

To achieve the credits here, there needs to be either a 10% (for 1 credit) or 15% (2 credits) reduction in CO_2 emissions through the use of LZC technologies (i.e. "renewables"). This is demonstrated via the SAP calculations – specifically a "Standard Case SAP" needs to be produced. This usually has no cost implication, and some SAP software packages produce this automatically.

In addition to this, the technologies must be approved with the Microgeneration Certification Scheme (MCS) or CHPQA standard for Combined Heat and Power systems.

At this stage, we have assumed that no renewables will be used, or at least, if they are, they will not necessarily provide a 10% reduction in emissions.

These credits are effectively "tradable" with ENE1 and ENE2, so the overall score for the 3 areas is what will be targeted in the most cost effective way possible.

ENE8 - Cycle Storage

Predicted: 2 of 2 Credits

Mandatory Element? - No

Aim

To encourage the wider use of bicycles as transport by providing adequate and secure cycle storage facilities, thus reducing the need for short car journeys.

Assessment Criteria

Credits are awarded where adequately sized, safe, secure, convenient and weatherproof cycle storage is provided for the dwelling.

Pre-assessment Appraisal

The number of credits achievable for this issue is dependent on the number of bedrooms being served. For a dwelling of this size, storage for 2no. Cycles per dwelling will be needed.

The storage will need to be "secure" and "accessible" to achieve the credits – the exact details of this can be confirmed later in the process.

Although not currently shown on the drawings, it is assumed that cycle storage can be incorporated somewhere in the scheme, perhaps in a garden shed.

ENE9 - Home Office

Predicted: 1 of 1 Credits Mandatory Element? - No

Aim

To reduce the need to commute to work by providing residents with the necessary space and services to be able to work from home.

Assessment Criteria

Credits are awarded on the basis of the provision of space and services that enable a room to be used effectively as a home office.

Pre-assessment Appraisal

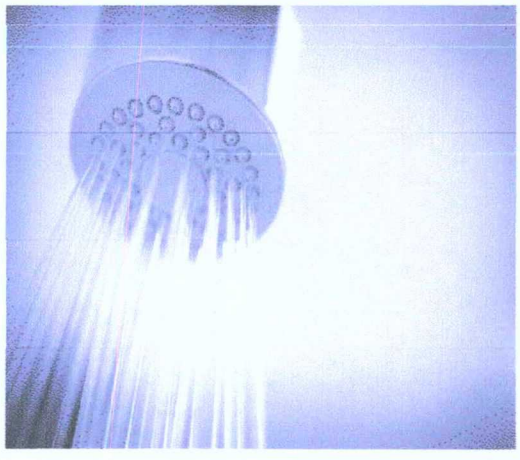
It seems that the requirements for this credit, in terms of space, daylighting and ventilation can be met without any issues.

To achieve the credit, a suitable area (1800mm of clear wall space) needs to be identified on the plans, and the area must be provided with 2no. double power sockets and a BT socket. Daylight factor calculations will also need to be undertaken.

One of the two bedrooms will likely be the most suitable location.

Section 2

Water



WAT1 – Indoor Water Use

Predicted: 3 of 5 Credits

Mandatory Element? - yes

Aim

To reduce the consumption of potable water in the home from all sources, through the use of water efficient fittings, appliances and water recycling systems.

Assessment Criteria

Up to 5 credits are available for performance which reduces the amount of potable water used in the dwelling. There are minimum **mandatory** performance requirements for achieving all levels of the Code. The minimum mandatory requirements begin at level 1 increasing at level 3 and again at level 5.

Credits are available for all the indoor potable water performance levels required in the Code. Credits are awarded based on a whole house assessment of the efficiency of internal water fittings against a benchmark figure. The assessment is measured in litres per person per day using the Water Efficiency Calculator for New Dwellings.

Pre-assessment Appraisal

This issue has a **mandatory** minimum standard of 105 l/p/day for Levels 3 and 4. This would score 3 credits. If this is not achieved then the dwelling will not achieve a Level 3 certification. This requirement is in excess of what is now required by Part G of the Building Regulations (which requires 125l/person/day), but calculated, and generally achieved in the same way.

An example specification (there are many more permutations) that would achieve this requirement would be:

- Basin Taps – 4l/min
- Bath – 150l capacity
- Showers 10l/min
- WC's – 4/2.6l dual flush
- Kitchen taps – 3l/min

- No Rain or Grey Water Harvesting
- No water softener or waste disposal,
- Washing machine or dishwasher provided, but default figures used
    - Overall Usage – **104.6**l/person/day

The exact details of the sanitary ware specification will, of course, be decided later in the project, but we will provide the design team with a compliant specification to work to when selecting products

WAT 2 – External Water Use

Predicted: 1 of 1 Credits

Mandatory Element? - No

Aim

To encourage the recycling of rainwater and reduce the amount of mains potable water used for external water uses.

Assessment Criteria

One credit is awarded where a correctly specified and sufficient sized system to collect rainwater for external/internal irrigation use has been provided to a dwelling with a garden, patio or communal garden space (examples of such systems include rainwater butts and central rainwater collection systems).

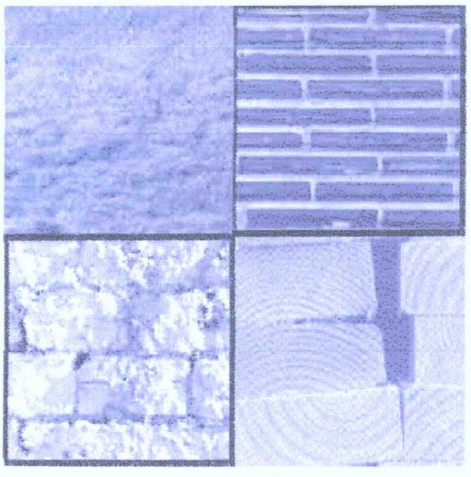
Pre-assessment Appraisal

It is assumed that if the credit for WAT1 is to be achieved without the use of rainwater harvesting, then this credit should be sought by installing a rainwater butt to provide the private garden with water for irrigation.

The size requirement is variable depending on the size of dwelling. For a house of this size, a water butt of at least 200l is required. If rainwater harvesting for internal use is employed, this credit can still be achieved, if the system provides water externally, and there is more than 5l/person/day left over, once the internal use has been factored in.

Section 3

Materials



MAT1 – Environmental Impact of Materials

Predicted: 12 of 15 Credits

Mandatory Element? - Yes

Aim

To encourage the use of materials with lower environmental impacts over their lifecycle.

Assessment Criteria

This issue has a **mandatory** requirement to achieve a Green Guide rating of between A+ and D for at least three of the following five elements of the building envelope:

- Roof
- External Walls
- Internal Walls (including separating walls)
- Upper and Ground Floors (including separating floors)
- Windows

Between 1 and 15 credits are available depending on the Green Guide ratings and relative distributions of different materials across the five main elements of the building envelope. The method for determining the credits uses the Code Mat 1 calculator tool, where 0-3 credits are available for each of the 5 building elements (giving a total score out of 15)

Pre-assessment Appraisal

Detailed construction drawings are required to assess this issue, but based on our experience of similar projects, 12 credits is generally achievable without too much difficulty. We will make the assessment against the Green Guide when sufficient information is available.

Consideration should be given to the ratings when deciding the final specification, since small changes can sometimes result in extra credits at little or no cost.

MAT2 - Responsible Sourcing of Materials- Basic Building Elements

Predicted: 0 of 6 Credits

Mandatory Element? - No

Aim

To recognise and encourage the specification of responsibly sourced materials for the basic building elements.

Assessment criteria

Points are awarded where 80% of assessed materials used in key building elements are responsibly sourced in accordance with the Code requirements. For example, timber can be certified using FSC or PEFC standards. For non-timber the route to compliance is slightly more complicated.

Pre-Assessment Appraisal

This is a potentially complex issue, and it is recommended that credits are not pursued unless necessary. The Materials section has a low weighting, and so the ratio of cost/time input : benefit, makes these credits not worth pursuing in most cases.

MAT3 - Responsible Sourcing of Materials- Finishing Elements

Predicted: 0 of 3 Credits Mandatory Element? - No

Aim

To recognise and encourage the specification of responsibly sourced materials for the finishing elements.

Assessment criteria

Points are awarded where materials used in the building's finishing elements are responsibly sourced in accordance with the Code requirements. This includes areas such as fascias, skirting, kitchen units etc.

Pre-Assessment Appraisal

The requirements for this credit are the same as MAT2, but it is finishing elements (fascias, skirting, windows, doors etc.) which are assessed. Although it is possible that some credits could be sought, it is assumed for now that 0 will be achieved. Further discussion on this is required to ascertain if any points can be scored.

Section 4

Surface Water Run-Off



SUR1 – Management of Surface Water Run-off

Predicted: 0 of 2 Credits

Mandatory Element? - Yes

Aim

To design housing developments which avoid, reduce and delay the discharge of rainfall to public sewers and watercourses.

Pre-Assessment Appraisal

This is a complex issue, with a mandatory requirement which scores no credit. It must be ensured that the peak rate of run-off is no greater post-development than pre-development and that any additional volume of runoff under certain conditions is reduced using methods from the hierarchical approach outlined in the Code. This must be undertaken by a consultant engineer, - ideally using the BRE pro-forma. It must also be accompanied by a Flood Risk Assessment.

It is possible to meet this requirement by default if there is no increase in impermeable area of the site. It appears from the information we have that there will be n increase in the impermeable area.

If this is the case, then a suitable consultant will be needed to verify how the excess run-off will be mitigated, to meet the mandatory requirement. Generally this will necessitate the use of soakaways or Rainwater Harvesting.

For the 2 credits to be achieved, a SuDS (Sustainable Urban Drainage System) needs to be employed which is designed to ensure no run-off to the watercourse for rainfall depths of 5mm. The system also needs to treat the surface water in line with the Code guidance and SuDS best practice for the second credit

It is assumed at this stage that the credits are not going to be achieved, but until discussion has taken place with the design team, it is not possible to predict with any certainty.

SUR2 – Flood Risk

Predicted: 2 of 2 Credits

Mandatory Element? - No

Aim

To encourage housing development in low flood risk areas, or to take measures to reduce the impact of flooding on houses built in areas with a medium or high risk of flooding.

Assessment Criteria

Up to 2 credits are awarded where the assessed dwellings are located either in an area of low annual probability of flooding, or where a Flood Risk Assessment (FRA) shows that appropriate measures have been taken to ensure safe access and escape routes and flood resilient and resistant construction.

Pre-assessment Appraisal

From the Environment Agency Flood Map, it appears the site is well outside of the Flood Risk Zone (see Figure 3). However to achieve the credits, an actual Flood Risk Assessment needs to be produced which demonstrates no risk of flooding from all sources as defined in PPS25. This will give 2 credits, and it is predicted that these will be scored. The Flood Risk Assessment is required for SUR1 as well, and is generally wrapped into the same body of work.



Fig. 3: Environment Agency Flood Risk Map for LE10 1LD

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Section 5

Waste



WAS1 - Storage of Non-recyclable and Recyclable Household Waste

Predicted: 4 of 4 Credits

Mandatory Element? - Yes

Aim

To recognise and reward the provision of adequate internal and external storage space for non-recyclable waste and recyclable household waste.

Assessment Criteria

The first issue of household waste storage sets a **mandatory** performance requirement with no available credits. This requirement must be met if a Code rating is to be achieved. Adequate internal space and adequate external space are defined in the definitions section of the technical guide. Credits are awarded for the provision of storage space for household and recycling waste. Care must be taken to make sure that facilities are accessible to disabled people. There are 2 checklists used to assess the design.

Pre-Assessment Appraisal

This issue has a **mandatory** requirement which scores no credits. The requirement is for the external storage for non-recyclable and recyclable waste to meet at least the requirements of BS 5906 (i.e. 100l for the 1st bedroom and 70l each for any other bedrooms), *or* the Local Authorities storage requirements, whichever is the *greater.*

To achieve the predicted 4 credits, provision must also be made for storing recyclable waste internally. As Hinckley and Bosworth requires residents to sort their recycling, the developer needs to provide a compartmented bin, fixed into a kitchen cupboard, with three sections, no smaller than 30l in total capacity and no individual bin smaller than 7l in capacity such as the one shown below:



WAS2 - Construction Site Waste Management

Predicted: 3 of 3 Credits

Mandatory Element? - NO

Aim

To promote reduction and effective management of construction related waste through the use of a Site Waste Management Plan (SWMP).

Assessment Criteria

Management of waste on the construction site must comply with the criteria set out in the technical guide.

Pre-assessment Appraisal

As the build cost for this site is assumed to be in excess of £300k, the site is legally required to have a Site Waste Management Plan under the SWMP Regulations, 2008.

Since a plan is required anyway, it makes sense to increase the scope and depth of the plan to allow these 2 credits to be attained. To achieve 2 of the 3 available credits, the SWMP must contain:

- Target benchmarks for resource efficiency, i.e. m^3 of waste per 100 m2 or tonnes of waste per 100 m2 set in accordance with best practice
- Procedures and commitments to minimize non-hazardous construction waste at design stage. Specify waste minimisation actions relating to at least 3 waste groups and support them by appropriate monitoring of waste.
- Procedures for minimising hazardous waste
- Monitoring, measuring and reporting of hazardous and non-hazardous site waste production according to the defined waste groups.
- procedures and commitments to sort and divert waste from landfill, through either;
    - Re-use on site (in situ or for new applications)
    - Re-use on other sites
    - Salvage/reclaim for re-use
    - Return to the supplier via a 'take-back' scheme
    - Recovery and recycling using an approved waste management contractor
    - Compost

This needs to result in at least **85%** of non-hazardous waste (by volume) being diverted from landfill. It is assumed that this requirement will be met without any difficulty at this stage, especially since there appears to be no demolition required.

WAS3 – Composting

Predicted: 1 of 1 Credits

Mandatory Element? - NO

Aim

To encourage developers to provide the facilities to compost household waste, reducing the amount of household waste sent to landfill.

Assessment Criteria

Credits are awarded where home composting facilities are provided in houses with gardens or Local Authority kitchen waste collection/communal/community composting service in other dwelling types. The composting facilities should be suitable for normal domestic, green/garden, food and other compostable household waste. All facilities should be accompanied by information explaining how they work.

Pre-assessment Appraisal

For a single dwelling, the requirement would be for a home composting bin, situated in a suitable, accessible place in the garden. A leaflet explaining the benefits of composting must also be provided.

Careful consideration needs to be made for the location and accessibility of the facility, but there is no reason not to achieve this credit

Section 6

Pollution



POL1 - Global Warming Potential (GWP) of Insulants

Predicted: 1 of 1 Credits

Mandatory Element? - No

Aim

To reduce global warming from blowing agent emissions that arise from the manufacture, installation, use and disposal of foamed thermal and acoustic insulating materials.

Assessment Criteria

1 credits is awarded where all insulating materials in the dwelling only use substances that have a GWP < 5 (manufacture AND installation).

Pre-Assessment Appraisal

It is assumed that this credit should be achievable. The developer and design team need to be aware of the requirement and the level of detail that it applies to (i.e. all forms of insulation including acoustic need to comply).

The majority of insulation products on the market comply with this now, but there are still some that do not (notably pipe-lagging and hot and cold storage insulation). The developer and design team will need to ensure that products used are compliant.

POL2 - NO_x Emissions

Predicted: 3 of 3 Credits

Mandatory Element? - No

Aim

To reduce the emission of nitrogen oxides (NO_X) into the atmosphere.

Assessment Criteria

Credits are awarded on the basis of NO_x emissions arising from the operation of space heating and hot water systems for each dwelling,

Pre-Assessment Appraisal

The proposal for heating is not yet known, but it is assumed at this stage that a gas boiler will be the preferred solution.

If this is the case, then a boiler should be selected which has NO_x emissions of less than 40mg/kWh to enable the 3 predicted credits to be achieved.

Section 7

Health and Wellbeing



HEA1 – Daylighting

Predicted: 3 of 3 Credits

Mandatory Element? - No

Aim

To improve the quality of life in homes through good daylighting and to reduce the need for energy to light the home.

Assessment Criteria

Credits are awarded for the dwellings meeting the criteria set out in the technical guide. For one credit, kitchens must have a daylight factor of 2%. For the second credit, living and dining rooms and any room allocated as a home office must achieve 1.5%. All of the assessed rooms must achieve a view of the sky to 80% of the room area for the third credit.

Pre-Assessment Appraisal

The calculations to demonstrate compliance with this issue need to undertaken by a suitable consultant.

Our prediction is that all 3 credits will be achieved easily, as the design incorporates plenty of fenestration, and there are few surrounding obstructions.

HEA2 – Sound Insulation

Predicted: 4 of 4 Credits

Mandatory Element? - No

Aim

To ensure the provision of improved sound insulation to reduce the likelihood of noise complaints from neighbours.

Assessment Criteria

Credits are awarded for achieving higher standards of sound insulation than those given in Approved Document E of the Building Regulations and demonstrating it by either using pre-completion testing or Robust Details.

Pre-assessment Appraisal

The dwelling is detached, and therefore scores a default of 4 credits here. No further action is needed.

HEA3 – Private space

Predicted: 1 of 1 Credits

Mandatory Element? - No

Aim

To improve the occupiers' quality of life by providing an outdoor space for their use, which is at least partially private.

Assessment Criteria

1 credit is achievable for providing a suitable outdoor space at a rate of 1.5m2 per bedroom (for private space).

Pre-assessment Appraisal

The outdoor space provided is easily compliant with the space requirements, but consideration will need to be made to the specific requirements relating to accessibility.

The outdoor space provided must:

- be of a minimum size that allows all occupants to sit outside
- allows easy access to all occupants, including wheelchair users
- be accessible only to occupants of designated dwellings.

Checklist IDP is used to assess the accessibility requirements, and the design team should be aware of this when looking at thresholds and turning spaces.

HEA4 – Lifetime Homes

Predicted: 4 of 4 Credits

Mandatory Element? - No

Aim

To encourage the construction of homes that are accessible and easily adaptable to meet the changing needs of current and future occupants.

Assessment Criteria

The developer will need to complete a checklist which identifies the 16 (where relevant) Lifetime Homes criteria and commit to achieving the standard.

Pre-assessment Appraisal

This issue is effectively an "all or nothing" scenario (although there is now a small dispensation for dwellings on steeply sloping sites), in that all of the relevant LTH requirements must be met, or no credits are scored. Not all of the LTH requirements are applicable to all dwellings – communal lifts being the most obvious example.

From a preliminary look at the drawings, it seems that Lifetime Homes should be achievable without too much difficulty.

The Design Team will need to check for compliance and advise if the standard is not going to be met, as these credits are currently assumed to be scored and make a significant contribution to the overall score.

Section 8

Management



MAN1 – Home User Guide

Predicted: 3 of 3 Credits

Mandatory Element? - No

Aim

To encourage and reward provision of guidance enabling occupants to understand and operate their home efficiently and make the best use of local facilities.

Assessment Criteria

Credits are awarded for the provision of a simple user guide which covers information relevant to the 'non-technical' tenant/owner on the operation and environmental performance of their home, as detailed in the technical guide.

Pre-assessment Appraisal

This is a relatively straight forward credit to achieve. It is important to identify who has responsibility for producing the guide, so that the relevant party can be made aware of the requirements. This is a service that we can provide if needed.

There are guides and checklists available to ensure all of the specific Code elements are covered, which we can provide.

MAN2 - Considerate Constructors Scheme

Predicted: 0 of 2 Credits

Mandatory Element? - No

Aim

To recognise and encourage construction sites managed in an environmentally and socially considerate and accountable manner.

Assessment Criteria

Credits are awarded where there is a commitment to comply with best practice site management principles as detailed in the Code technical Guide.

Pre-Assessment Appraisal

On a small site such as this, it is generally not economical to pursue these credits. Considerate Constructors has a number of requirements which are more appropriate to larger sites (for example providing showering facilities), which are not likely to be practical here.

As a result, we have assumed these credits will not be pursued.

MAN3 - Construction Site Impacts

Predicted: 2 of 2 Credits | Mandatory Element? - No

Aim

To recognise and encourage construction sites managed in a manner that mitigates environmental impacts.

Assessment Criteria

Credits are awarded where there is a commitment and strategy to operate site management procedures on site as detailed in the Code technical guide.

Pre-assessment Appraisal

Credits are scored for achieving 2 (for 1 credit) or 4 (for both credits) of the six items on the following list:

- Monitor, report and set targets for CO2 production or energy use arising from site activities
- Monitor and report CO2 or energy use arising from commercial transport to and from site
- Monitor, report and set targets for water consumption from site activities
- Adopt best practice policies in respect of air (dust) pollution arising from site activities
- Adopt best practice policies in respect of water (ground and surface) pollution occurring on the site
- 80% of site timber is reclaimed, re-used or responsibly sourced

It is assumed at this stage that compliance with 4 of these items will be achievable (generally the last 4 on the list), and this is to be discussed in de course.

Man 4 Security

Predicted: 0 of 2 Credits | Mandatory Element? - No

Aim

To encourage the design of developments where people feel safe and secure; where crime and disorder, or the fear of crime, does not undermine quality of life or community cohesion.

Assessment Criteria

Credits are achieved by complying with Section 2 – Physical Security from 'Secured by Design New Homes', as detailed in the Code Technical Guide.

Pre-assessment notes

To achieve these credits, the Secured by Design criteria must be followed by the design team and the local Police Architectural Liaison Officer must be contacted and appointed to advise on the scheme early in the design process.

The development must then achieve either full Secured by Design certification, *or* "Section 2 Compliance", meaning that the ALO has stated that the relevant parts of Section 2 of SbD have been met (this covers areas such as windows and doors)

In this instance these credits are assumed not to be targeted at this stage. Compliance with Secured by Design can be quite difficult, and will restrict the choice of windows and doors considerably.

Section 9

Ecology



ECO1 - Ecological Value of Site

Predicted: 0 of 1 Credits

Mandatory Element? - No

Aim

To encourage development on land that already has a limited value to wildlife, and discourage the development of ecologically valuable sites.

Assessment Criteria

Credits are awarded where the site is defined as land of inherently low ecological value in accordance with the criteria in the technical guide.

Pre-assessment Appraisal

From the information we have available, it appears that the site currently has some ecological features, and therefore this credit will not be achievable (unless an Ecologist is appointed to analyse the site in more detail).

Commissioning an ecology report would be an expensive way to achieve credits on a small site, with no guarantee that the credits would even be achievable.

ECO2 - Ecological Enhancement

Predicted: 0 of 1 Credits

Mandatory Element? - No

Aim

To enhance the ecological value of a site.

Assessment Criteria

Where there is a commitment to enhance the ecological value of the development site in accordance with the criteria in the technical guide and abbreviated above in ECO 2.

Pre-assessment Appraisal

This credit requires the appointment of an Ecologist who will recommend appropriate ecological measures. The key recommendations within the report must all be adopted along with 30% of additional recommendations.

As this is likely to be the only credit an Ecologist will be able to help with, it would be an expensive way to gain a single credit. We have therefore predicted 0 to be scored in this section.

ECO3 - Protection of Ecological Features

Predicted: 0 of 1 Credits

Mandatory Element? - No

Aim

To protect existing ecological features from substantial damage during the clearing of the site and the completion of construction works.

Assessment Criteria

Where there is a commitment to maintain and adequately protect features of ecological value during site preparation and construction works in accordance with the criteria in the technical guide.

Pre-assessment Appraisal

At this stage, sufficient information to make an assessment of this credit is not available. For surety, we have assumed that it will not be achieved, but should there be a suitable commitment from the developer to protect the existing ecological features, in accordance with the Code requirements, then this credit may be attainable.

It is held in reserve for now, and if an Ecologist is appointed, they will advise further on whether this credit is achievable.

ECO 4 - Change in Ecological Value of Site

Predicted: 2 of 4 Credits

Mandatory Element? - No

Aim

To reward steps taken to minimise reductions and to encourage an improvement in ecological value.

Assessment Criteria

Credits are awarded where the resulting change in ecological value is as detailed in the technical guide and outlined in the table ECO 4 above.

Pre-assessment Appraisal

These credits are achieved for enhancing the ecology of the site by increasing the calculated number of species per hectare. This is done mathematically, using researched species/hectare figures for a range of different habitats.

2 credits are available for a neutral change to the site's value. Since this site will be a dwelling with garden, being replaced more or less like for like, this constitutes a neutral change, and therefore we predict 2 credits will be scored.

ECO5 - Building Footprint

Predicted: 0 of 2 Credits

Mandatory Element? - No

Aim

To promote the most efficient use of a building's footprint by ensuring that land and material use is optimised across the development.

Assessment Criteria

Credits are awarded where the ratio of combined Net Internal Floor Area (NIFA) to Net Internal Ground Floor Area (NIGFA) meets the requirements set out in the technical guide. For houses, 1 credit is available for a ratio of 2.5:1 and 2 credits for a ratio of 3:1 (for houses)

Pre-assessment Appraisal

The dwelling is single storey, and so scores 0 credits under this issue.

Appendix 1: Twenty16 Design Credit Tracker

Twenty16 Design

Job Number: 1181
Job Name: Land R/O Butt Lane, Hinckley
Status: PA
Author: OW
Date: January - 13

Credit	Targeted Y/N	Mandatory Element?	Credits Available	Credits Targeted	Reasons/Requirements	Achieved?	Action Required	Action By	Can be Covered with Letter of Intent
ENE1 -Dwelling Emission Rate	Yes	Yes	10	0.1		No			No
ENE2 - Fabric Energy Efficiency	Yes	Yes	9	3.0		No			No
ENE3 - Energy Display Devices	Yes	No	2	2		No			Yes
ENE4 - Drying Space	Yes	No	1	1		No			Yes
ENE5 - Energy Labelled White Goods	Yes	No	2	2		No			Yes
ENE6 - External Lighting	Yes	No	2	2		No			Yes
ENE7 - LZC Technologies	No	No	2	0		-			
ENE8 - Cycle Storage	Yes	No	2	2		No			Yes
ENE9 - Home Office	Yes	No	1	1		No			Yes
Section Total		Credit Value	31	15					
Section Total After Weighting Applied		1.12	36.40%	15.3					
WAT1 - Internal Water Use	Yes	Yes	5	3		No			Partly
WAT2 - External Water Use	Yes	No	1	1		No			Yes
Section Total		Credit Value	6	4					
Section Total After Weighting Applied		1.5	9.00%	6.0					
MAT1 - Environmental Impact of Materials	Yes	Yes	15	12		No			No
MAT2 - Responsible Sourcing - Basic Elements	No	No	6	0		-			
MAT3 - Responsible Sourcing - Finishing Elements	No	No	3	0		-			
Section Total		Credit Value	24	12					
Section Total After Weighting Applied		0.3	7.20%	3.6					
SUR1 - Surface Water Run-off	No	Yes	2	0		No			No
SUR2 - Flood Risk	Yes	No	2	2		No			No
Section Total		Credit Value	4	2					
Section Total After Weighting Applied		0.5	2.00%	1.0					
WAS1 - Storage of Household Waste	Yes	Yes	4	4		No			No
WAS2 - Construction Site Waste Management	Yes	No	3	3		No			Yes
WAS3 - Composting	Yes	No	1	1		No			Partly
Section Total		Credit Value	8	8					
Section Total After Weighting Applied		0.8	8.00%	8.0					
POL1 - GWP of Insulants	Yes	No	1	1		No			No
POL2 - NOx Emissions	Yes	No	3	3		No			Yes
Section Total		Credit Value	4	4					
Section Total After Weighting Applied		0.2	2.80%	2.8					
HEA1 - Daylighting	Yes	No	3	3		No			Partly
HEA2 - Sound Insulation	Yes	No	4	4		Yes			No
HEA3 - Private Space	Yes	No	1	1		No			Partly
HEA4 - Lifetime Homes	Yes	No	4	4		No			No
Section Total		Credit Value	12	12					
Section Total After Weighting Applied		1.2	14.00%	14.00					
MAN1 - Home User Guide	Yes	No	3	3		No			Yes
MAN2 - Considerate Constructors Scheme	No	No	2	0		-			Yes
MAN3 - Construction Site Impacts	Yes	No	2	2		No			Yes
MAN4 - Security	No	No	2	0		-			Yes
Section Total		Credit Value	9	5					
Section Total After Weighting Applied		1.1	10.00%	5.5					
ECO1 - Ecological Value of Site	No	No	1	0		-			No
ECO2 - Ecological Enhancement	No	No	1	0		-			No
ECO3 - Protection of Ecological Features	No	No	1	0		-			No
ECO4 - Change in Ecological Value	Yes	No	4	2		Yes			No
ECO5 - Building Footprint	No	No	2	0		-			No
Section Total		Credit Value	9	2					
Section Total After Weighting Applied		1.3	12.00%	2.6					
Total				57.5%	Code Level Predicted	Level 3			

Appendix 2: The Code for Sustainable Homes

The Code for Sustainable Homes

The Code for Sustainable Homes has been developed using the Building Research Establishment's (BRE) EcoHomes System, which has already achieved success in reducing the environmental impact of many housing projects and in particular within the social housing sector. The Code builds upon EcoHomes in a number of ways, for example:

- The Code introduces minimum mandatory standards for energy and water efficiency
- Credits must apply to each dwelling and cannot be averaged across a site
- The Code includes new areas such as Lifetime Homes and composting facilities
- The Design commitments are verified with a Site visit

Categories

There are nine credit categories within which there are a varying number of credits which can be scored as outlined below

- Energy and CO_2 Emissions
- Water
- Materials
- Surface Water Run-off
- Materials
- Waste
- Health and Wellbeing
- Management
- Ecology

Scoring & Weighting

Within each category are a number of credits which can be awarded if the criteria are met to achieve a total score. Each credit category also has a weighting which relates to the perceived importance of the category across the whole assessment.
The total achieved scores from each category are multiplied by the weighting factor to give the final score for that category. In the table below the categories which have the highest weighting factors have been highlighted.

Achieving credits in these categories will gain the developer a higher score for achieving fewer credits.

Credit Categories			
Category	Credits Available	Weighting	Score
Energy and CO_2 Emissions	31	1.17*	36.40
Water	6	1.50*	9.00
Materials	24	0.30*	7.20
Surface Water Run-off	4	0.55*	2.20
Waste	8	0.80*	6.40
Pollution	4	0.70*	2.80
Health and Wellbeing	12	1.17*	14.0
Management	9	1.11*	10.0
Ecology	9	1.33*	12.0
Totals	107		100%

*Weighting figures are only approximate.

Mandatory Credits

Minimum standards have been set for a number of categories as shown in the table below. These mandatory credits must be achieved for a development to achieve Code Level 3. The most challenging of these targets are those for energy efficiency and water efficiency.

Mandatory Credits for Code Level 3		
Category	Description	Percentage Points
Energy	Compliance with Part L 2010 in each dwelling	0 Points
Water	Domestic internal potable water consumption to be ≤105 litres/person/day in each dwelling	4.5 Points
Materials	All materials should be rated between A+ and D according to the Green guide to Specification	1.5 Points
Surface Water	Ensure peak run-off rates and annual volumes of run-off will be no greater than the previous conditions for the site.	0 Points
Waste	Provision of a minimum of external storage space for waste.	0 Points
Minimum points score for mandatory credits		6 Points

By achieving only the mandatory credits for Code Level 3 a score of approximately 6 points is achieved. The Code Level 3 Water and Energy mandatory elements are shown in the table below alongside the required overall score.

Scores required for compliance			
Code Level	Water Usage Litres / person / per day	Energy Improvement on Part L 2010	Total Score
Level 1	120	N/A	36
Level 2	120	N/A	48
Level 3	105	N/A	57
Level 4	105	25 %	68
Level 5	80	100 %	84
Level 6	80	Approx 150%	90

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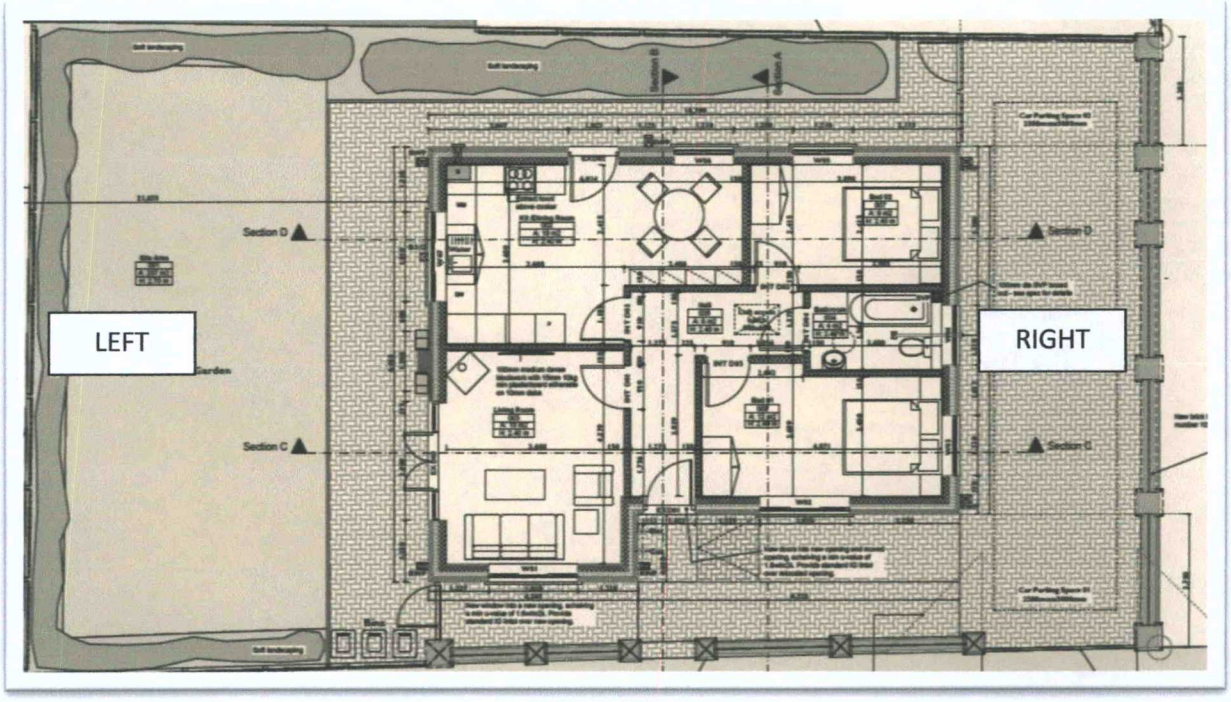
Appendix D Boundary Treatments

BOUNDARY TREATMENTS

REAR



FRONT

Front





Existing Fence to LHS of Front Retained & new low level wall directly in front of bungalow



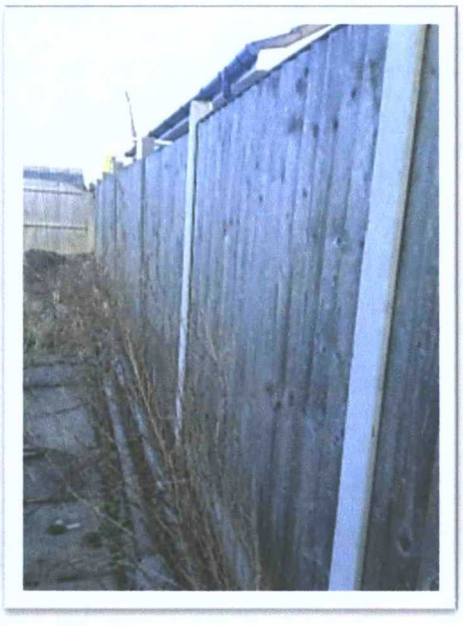
LHS

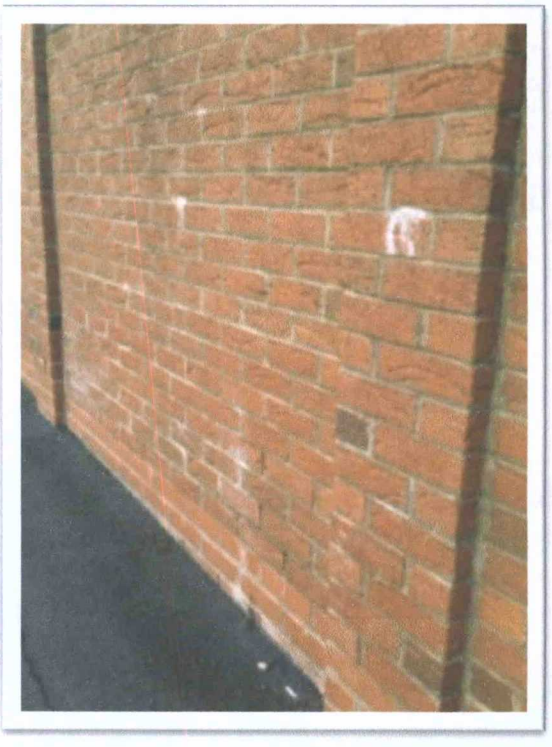
Existing New Fence



RHS

Remove Existing Fence & Replace with New wall (matching front low wall & facing bricks to bungalow)





REAR

Existing Fence



Appendix E Hard & Soft Landscaping

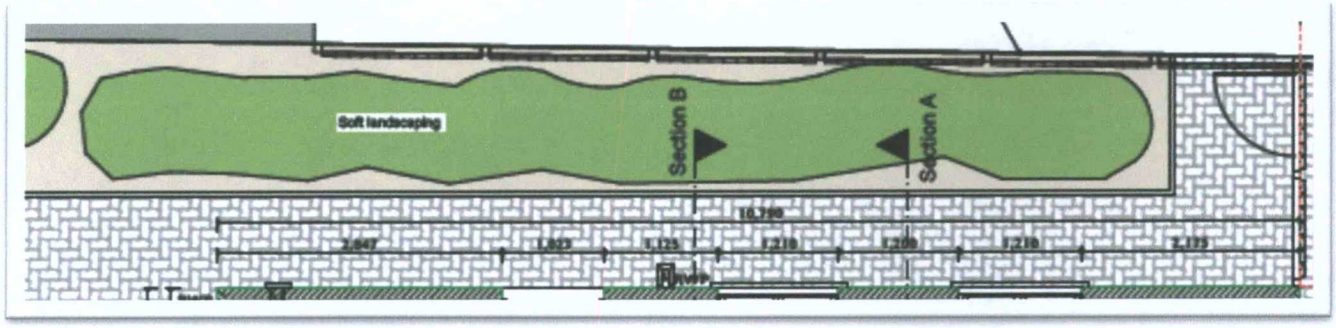
REAR GARDEN

SOFT

Borders with low level soft landscaping

HARD

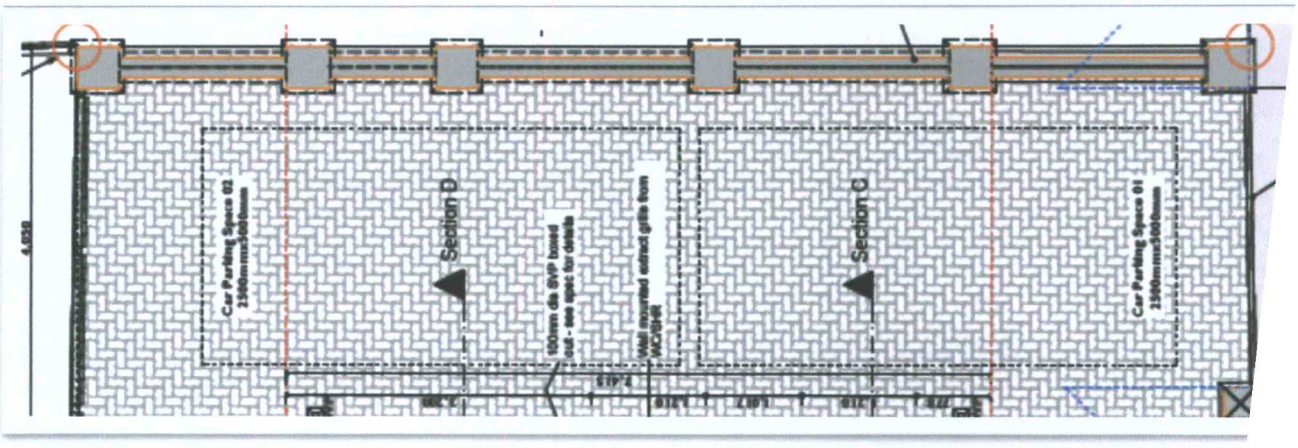
Bridle Block Paving Patio area 2m wide



SIDE DRIVE

HARD

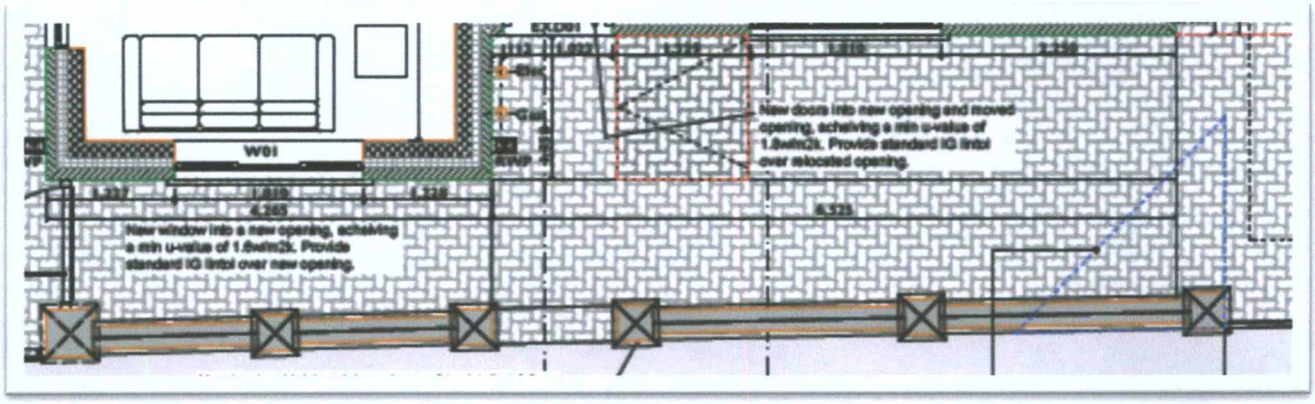
Bridle Block Paving Drive



FRONT GARDEN

HARD

Bridle Block Paving



HARD & SOFT LANDSCAPING

SIDE GARDEN

SOFT

Lawn Turfed

Borders with low level soft landscaping

HARD

Bridle Block Paving Patio area 2m wide

Bin Storage

